

## **REMARKS**

### **INTRODUCTION**

In accordance with the foregoing, claims 2, 10, 11, 22 and 23 have been amended. Claims 13 and 26 have been cancelled. Claims 2, 10, 11, 22 and 23 are pending and under consideration.

### **GROUND FOR ENTRY OF THIS RESPONSE PURSUANT TO 37 C.F.R. 1.116**

The Applicants respectfully request entry of this Rule 116 Response because it is believed that the amendments and arguments put forward place these claims in condition for allowance. These amendments and arguments were not earlier presented because the Applicants believed in good faith that the claims as recited in their previous form were allowable over the previously cited prior art and complied with 35 USC 112. The claims as amended address and resolve the 112 rejections. Furthermore, certain pending claims have been cancelled, without prejudice, to reduce the issues.

### **CLAIM OBJECTIONS**

Claims 13, 22 and 26 were objected to because of informalities. Claims 13 and 26 have been cancelled. Appropriate correction has been made to claim 22.

Withdrawal of the foregoing objection is requested.

### **CLAIM REJECTIONS – 112**

Claims 2, 10, 11, 13, 22, 23 and 26 were rejected under 35 USC 112, second paragraph, as being indefinite.

Regarding claims 13 and 26, these claims have been cancelled.

Regarding claims 2, 10, 11, 22 and 23, appropriate correction has been made to these claims.

Withdrawal of the foregoing rejection is requested.

### **CLAIM REJECTIONS – 103**

Claims 2, 10, 11, 13, 22, 23 and 26 were rejected under 35 USC 103(a) as being unpatentable over “Process Subsystem Architecture for Virtual Manufacturing Validation” by J. Michael Griesmeyer and Fred J. Oppel, III (hereinafter “Griesmeyer”) in view of Tonooka (US 6,332,265) (hereinafter “Tonooka”).

Claims 2, 10, 11, 13, 22, 23 and 26 were further rejected under 35 USC 103(a) as being unpatentable over “Virtual Reality and Simulation” by Martin Barnes (hereinafter “Barnes”) in view of “Simulation in the Next Millennium” by Sanjay Jain (hereinafter “Jain”) and further in view of Tonooka.

#### **Claims 2, 10 and 11**

Amended independent claim 2 recites: “...remotely monitoring the actual rolling bearing production facility and comparing the rolling bearing production state and the physical distribution state of the actual rolling bearing production facility with the virtual rolling bearing production facility; and selectively re-verifying the virtual rolling bearing production facility based on the comparison to the actual rolling bearing production facility.” In contrast to claim 2, Griesmeyer only discusses a virtual validation of the assembly sequences for factory components through the use of assembly subsystem control architecture. See Griesmeyer, page 2375, section 4. Griesmeyer does not discuss the operation of remotely monitoring an actual rolling bearing production facility and comparing the rolling bearing production state and the physical distribution state of the actual rolling bearing production facility with the virtual rolling bearing production facility. The disclosure in Griesmeyer does not contemplate a comparison with an actual rolling bearing production facility and the virtual rolling bearing production facility.

Claim 2 was additionally rejected based on a combination of Barnes, Jain and Tonooka. In contrast to claim 2, Barnes only discusses that a manufacturing design plan may be validated by simulating the actual manufacturing processes and equipment used in-house, at suppliers, etc. See Barnes, page 105, section 9.1.1. Barnes does not discuss comparing the rolling bearing production state and the physical distribution state of the actual rolling bearing production facility with the virtual rolling bearing production facility.

Further, this deficiency in Barnes is not cured by Jain. Jain also is concerned with the arrangement of subsystems in a factory, not with the overall design of a new factory. Jain

discusses a virtual factory having advanced decision support capability to rearrange components and business processes in the factory to ensure efficient operation of the factory. See Jain, page 1481-1482, section 3.1. Jain does not discuss comparing the rolling bearing production state and the physical distribution state of the actual rolling bearing production facility with the virtual rolling bearing production facility, but rather mimics the real life operations of one factory.

Claims 10 and 11 depend on claim 2 and are therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

**Claim 13**

Claim 13 has been cancelled.

**Claims 22 and 23**

Amended independent claim 22 recites: "...a remote monitoring system remote monitoring the actual rolling bearing production facility and the optimized virtual rolling bearing production facility..." It is respectfully submitted that neither Griesmeyer, Barnes, Jain nor Tonooka discuss the feature of claim 22 of a remote monitoring system remote monitoring the actual rolling bearing production facility and the optimized virtual rolling bearing production facility.

Claim 23 depends on claim 22 and is therefore believed to be allowable for at least the foregoing reason.

Withdrawal of the foregoing rejection is requested.

**Claim 26**

Claim 26 has been cancelled.

**CONCLUSION**

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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